2008 Planning Community of Practice Conference
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Collaborative Planning – Dredging Applications

Calcasieu River and Pass Dredged Material Management Plan (DMMP)

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Calcasieu River and Pass DMMP Project
Presentation Purpose

The purpose of this presentation **is to discuss the Collaborative Planning Process used to develop the Calcasieu River and Pass Dredged Material Management Plan (DMMP) and its associated recommendations**

Calcasieu River and Pass DMMP Project

Topics of Discussion

- Background
- Building the Team
- Establish Objectives and Metrics
- If we do nothing….
- Collaboratively Formulate Alternatives
- Collaboratively Evaluate Alternatives
- Recommended Plan
- Path Forward
- Concluding Remarks

Calcasieu River and Pass DMMP Project

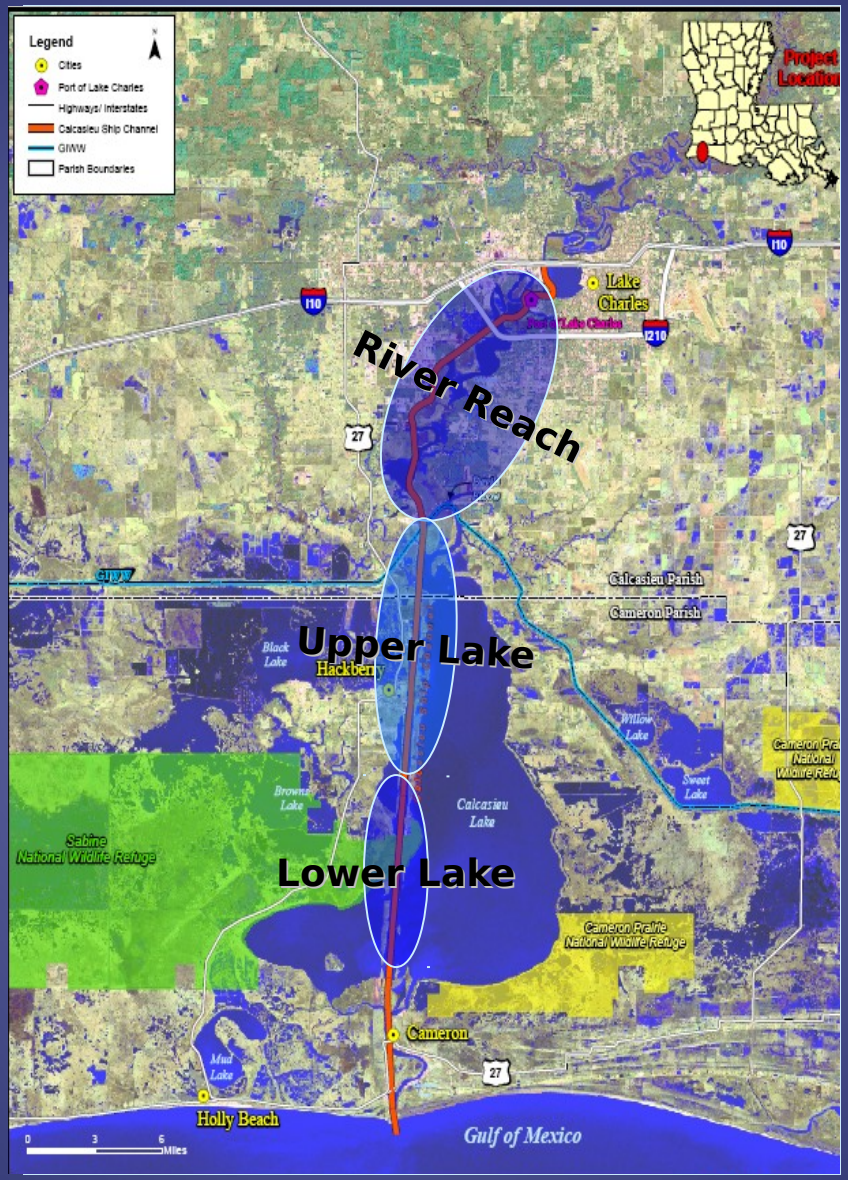
Background

Calcasieu Ship Channel extends from the City of Lake Charles to the Gulf of Mexico

- **Authorized under River and Harbor Act of 1946 authorized to 35 X 250-ft**
- **River and Harbor Act of 1960 – authorized to current dimension (40 X 400-ft)**
- **Senate and Public Works Committees**

Dec 1970 authorized Devil's Elbow

Project Location



Calcasieu River and Pass DMMP Project
Background

Statement of Problem

- **Limited dredged material disposal capability**
- **Channel dimensions reduced from authorized 400’ x 40’ in some areas**

Statement of Purpose

- **To identify various means of managing, handling, and disposing of sediments from the Calcasieu Ship Channel**

Calcasieu River and Pass DMMP Project
Background

In Accordance with ER 1105-2-100:

Dredged Material Management Plans

- **Most Cost Effective**
- **Environmentally Acceptable**
- **Sound engineering**
- **Sufficient disposal available for at least next 20 years**

Calcasieu River and Pass DMMP Project
Building the Team

A collaborative team was developed early

- ***Ensure that we could build support***
- ***And/or gain a position of no opposition***
- ***Sponsor, Stakeholders and resource agencies***

Calcasieu River and Pass DMMP Project

Building the Team

We had three tiers of collaborators:

1.) Tier 1 was comprised of those responsible for developing the DMMP and completing assigned study tasks.

- The Corps Project Delivery Team (PDT) and the local sponsor and their consultants

2.) Tier 2 were the Major stakeholders

- not involved in the daily workings of the project.
- State and Federal agencies that had significant input to the preferred plan

3.) Tier 3 were local stakeholders

- land owners, river pilots, channel users, recreational users and local industry

Calcasieu River and Pass DMMP Project
Building the Team

- **Benefits of the Tiered approach**
  - **Builds a connection between all interested parties and the PDT/Sponsor**
  - **Generates open communication**
    - **Nurtures relationship between all Tiers**
  - **Takes advantage of Diversity**
  - **Facilitates the discovery of alternatives acceptable to all stakeholders**

Calcasieu River and Pass DMMP Project
Building the Team

Early Engagement of Independent Technical Review Team

1.) The Independent Technical Review (ITR) Team was formed early in the project in an effort to reduce the schedule for conducting ITR.

2) The ITR Team reviewed technical reports upon completion of individual engineering, environmental, and economic studies.

3.) These technical reports constitute the foundation from which the document was developed; the technical reports were finalized through ITR as appendices to the report as they were completed.

4.) ITR team members were familiar with the DMMP-SEIS content and approaches prior to review and schedule was maintained.

Calcasieu River and Pass DMMP Proje
Establish Objectives and Metrics

- DMMP Objectives and Metrics developed via the 3 Collaborating Tiers
- Collaborative Planning Meeting(s) to develop Objectives and Screening Criteria
  - Included all 3 Tiers
- Aligned the 3 Collaborating Tiers based upon a clear and common focus towards developing the DMMP

Calcasieu River and Pass DMMP Project
Establish Objectives

1. **Maintain the navigation channel to authorized dimensions.**

2. **Place the dredged material in the most cost-effective, environmentally acceptable, and implementable manner.**

3. **Optimize beneficial use of dredged material as funds and programs allow costs.**

4. **Provide flexibility for future disposal of dredged material.**

5. **Maintain dredged material disposal sites in a manner to optimize capacities and comply with sound economic and environmental principles.**

6. **Provide sites for the disposal of material dredged by private parties (industries along ship channel).**

Calcasieu River and Pass DMMP Project
Establish Metrics

Metrics (Scored 1-3)

- Available Capacity
- Contaminated Materials
- Oyster Impacts
- Costs
- Real Estate
- Armoring
- Recreation
- Coastal Protection and Restoration
  - Habitat and Constructability

Calcasieu River and Pass DMMP Project

If we do nothing….

Continued loss of disposal capacity

Continued reduction in channel dimensions

Ships will continue to “light-load”
- Adverse impacts on local, State and National economies

The 11th Largest Seaport in the U.S. will be impacted – 2006

Calcasieu handles 55 million tons of cargo annually. This will be reduced.

Missed Opportunities
- Beneficial Use
- Coastal Protection and Restoration
- Greater economic investment

Calcasieu River and Pass DMMP Project

If we do nothing… Regional Port Impacts

- Creates 31,325 Jobs
- Generates $2.3 Billion in Personal income
- Produces $4.6 Billion in Business Revenue
- Generates $250 Million in State and Local Taxes
- A Strategic Energy Waterway will struggle to maintain it's market viability
  - Produces 10% of the motor oils used in U.S. daily
  - Currently Home to the Largest U.S. LNG Plant
  - Stores 1/3 of the Strategic Oil Reserve
  - In 2006, a nine day channel closure increased U.S. energy costs $1 Billion

Calcasieu River and Pass DMMP Project

Collaboratively Formulate Alternatives

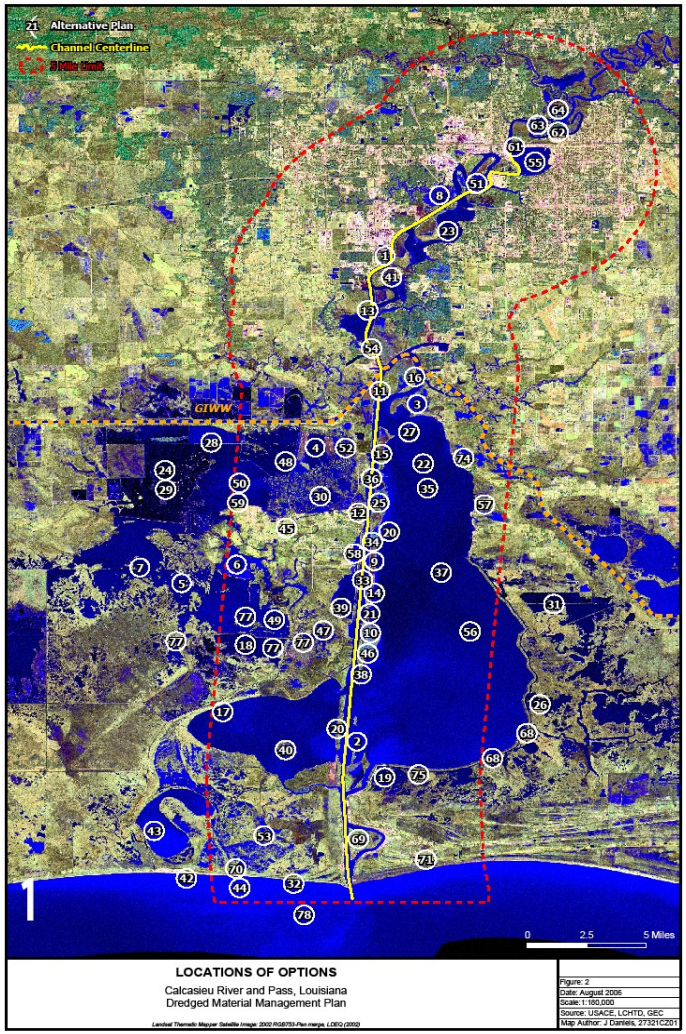
- **Based upon:**
  - **Objectives and screening criteria**
  - **Numerous Collaboration Meetings and Planning Charettes conducted**
    - **PDT Meetings – Tier 1 Collaborators**
    - **Meetings with State and Federal agencies – Tier 2 Collaborators**
    - **Landowner input – Tier 3 Collaborators**

Calcasieu River and Pass DMMP Project

Collaboratively Formulate Alternatives

- Monthly Tier 1 Meetings since April 2005
  - Project Planning Solutions April 2005
    - All 3 Collaboration Tiers
- Scoping Meetings (2) July 2005
  - All 3 Collaboration Tiers
- Tiers 1 and 2 Meetings
  - May 2006
  - October 2006
  - September 2007
  - October 2007
- Other meetings between Tier 1 and Tier 2 collaborators
  - LDWF – May 2006, Oct 2006
  - NMFS – May 2006
  - LDWF – December 2006
  - USFWS – July 2007
  - USFWS – August 2007

Brainstorming Session
78 Options Graphically displayed



22 Final Options

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Collaboratively Evaluate Alternatives

In Addition to Final Options

- **Confined Disposal Facilities were evaluated:**
  - **Potential Remaining Capacity**
  - **Refurbishing of CDFs**
  - **Dike Rehabilitation/Construction**

Calcasieu River and Pass DMMP Project

Collaboratively Evaluate Alternatives

Three reaches (River, Upper Lake, Lower Lake) evaluated for:

- Need (how much material to be dredged for next 20 years)
- CDF Capacity (how much is available)
- Private landowner cooperation
  - Beneficial Use Sites

Calcasieu River and Pass DMMP Project

Collaboratively Evaluate Alternatives

- River Reach
  - Adequate existing and expanded CDF Capacity to meet 20-year need:
  - Limited BU Opportunity
- Consensus of Tier 1- 3 Collaborators

Calcasieu River and Pass DMMP Proje

Collaboratively Evaluate Alternatives

- **Upper Lake**
  - **Dire need for disposal capacity**
  - **Reduced channel dimensions**
  - **Opportunities for beneficial use**
  - **Some willing landowners**
  - **Use of existing and expanded CDFs**
- **Consensus of Tier 1- 3 Collaborators**

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Collaboratively Evaluate Alternatives

- **Lower Lake**
  - **Use of existing CDFs**
    - **Limited capacity available**
  - **Excellent opportunity for beneficial use**
  - **Sabine and Cameron Prairie NWRs and School Board have requested dredged material**
- **Consensus of Tier 1- 3 Collaborators**

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Collaboratively Evaluate Alternatives

A. No Action

B. Priority Placement at Currently Available Sites

C. Emphasis on Placement at Beneficial Use Sites

D. Placement of Material in Ocean Dredged Material Disposal Site (ODMDS)

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Collaboratively Evaluate Alternatives

- Alternative A – No Action
  - Future without project
    - Continued loss of disposal capacity
    - Continued reduction in channel dimensions
    - Adverse impacts on local, state, and national economies
- **Consensus amongst all Collaborators to consider**
  - **Recognized to have undesirable consequences**
    - **As a result, eliminated from further consideration**

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Collaboratively Evaluate Alternatives

- Alternative D – ODMDS
  - Highest cost option - $800M
  - Uncertainty of Availability from EPA
  - Not consistent Federal emphasis on beneficial use
  - Loss of sediment for coastal restoration and protection
  - Not consistent with LA Coastal Management Program
  - Material from entire river may not be acceptable for offshore disposal

- **Consensus amongst all Collaborators to eliminate from further consideration**

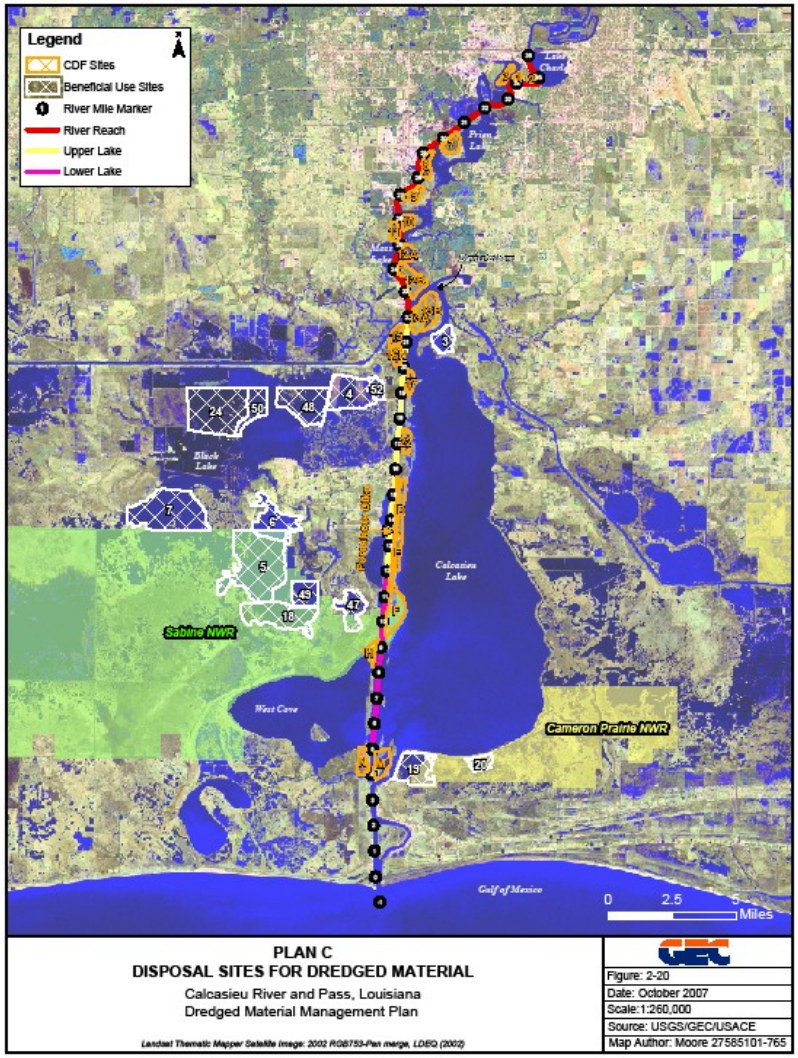
Calcasieu River and Pass DMMP Project

Collaboratively Evaluate Alternatives

- **Alternative C – Emphasis on Beneficial Use**
  - **Provides sufficient disposal capacity for 20 years**
  - **58% to BU; 42% to CDFs**
    - **13,000 acres of habitat restored**
  - **Estimated Cost – $650M over next 20-yrs**
  - **River Reach - existing and expanded CDFs**
  - **Upper Lake - emphasis on BU**
  - **Lower Lake – emphasis on BU wildlife refuges**
- **High level of Uncertainty with BU implementation**
  - **Private Lands**

❑ **Consensus amongst Collaborators to retain for further consideration**

Alternative C, Emphasis on BU Sites



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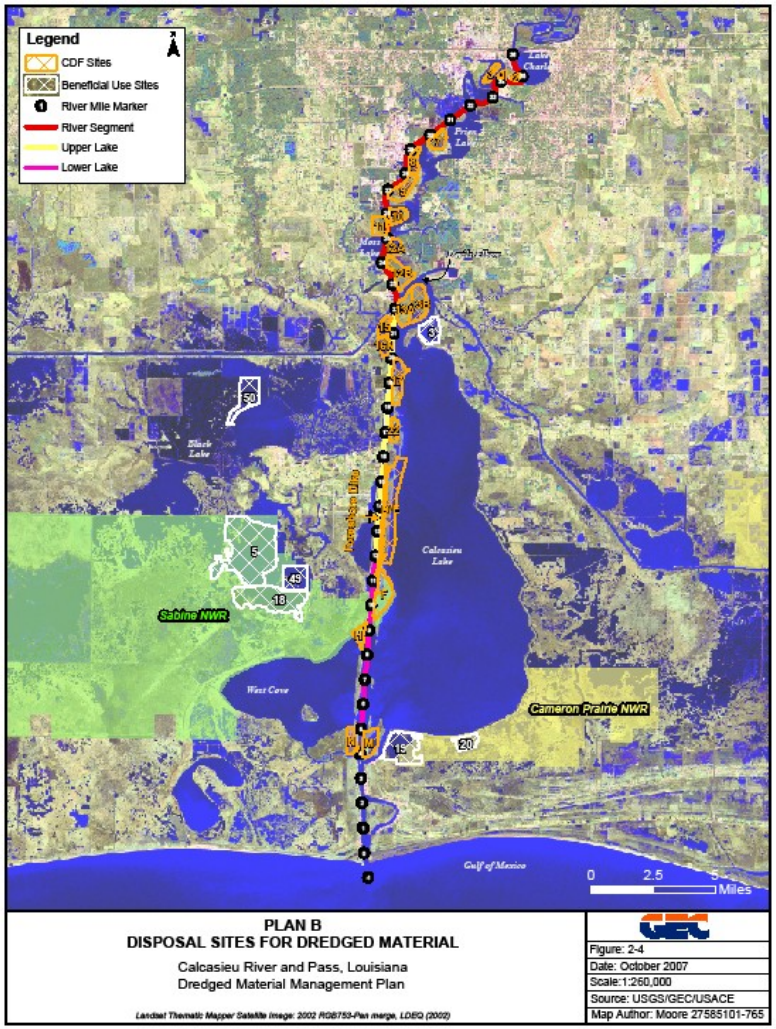
Collaboratively Evaluate Alternatives

- Alternative B – Emphasis on CDFs
  - Provides sufficient disposal capacity for 20 years
    - 7,000 acres of habitat restored
    - 37% to BU; 63% to CDFs
    - Estimated Cost - $625M over next 20-years
- River Reach - CDFs
- Upper Lake - CDFs and BU
- Lower Lake - CDFs and BU
- Many BU sites located on public lands
- High degree of reliability
  - RE requirements considered supportive landowners

❑ **Consensus amongst Collaborators to retain for further consideration**

Alternative B, Placement at Currently Available Sites



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Collaboratively Evaluate Alternatives

- **Comparison of Alts B and C**
  - **Capacity**
    - **Alt B: Adequate Capacity**
    - **Alt C: Adequate Capacity**
  - **Total Cost**
    - **Alt B: $625M**
    - **Alt C: $650M**
  - **Degree of Reliability**
    - **Alt B: High degree of certainty (supportive landowners)**
    - **Alt C: Uncertainty (“difficult” landowners)**
  - **Technical Risk**
    - **Alt B: Low risk (extensive reliable data available)**
    - **Alt C: High risk (little geotech, engineering data)**
  - **Environmental Benefits**
    - **Alt B: Moderate environmental benefit**
    - **Alt C: High environmental benefit**
  - **Disposal of Contaminated Sediments**
    - **Alt B: provides capability throughout channel**
    - **Alt C: limited capability**

Calcasieu River and Pass DMMP Project

Tentatively Recommended Plan

- Plan B
- Provides adequate capacity
- Has Lowest Total Project Cost
- Highest degree of certainty amongst final array of alternatives
- Provides significant environmental benefits
  - 7000 acres of intertidal marsh created
- IAW ER 1105-2-100, provides a plan that is environmentally acceptable, using sound engineering techniques, economically warranted, and has sufficient disposal capacity for the next 20 years.
- The benefit/cost ratio approx. 8:1

Calcasieu River and Pass DMMP Project

Path Forward/Project Implementation

- Mobile District provided ITR support for the Integrated DMMP/SEIS
- Cost Risk Analysis will be performed on recommended plan using the Crystal Ball Method
- Document will go to External Peer Review in May 2008
- Implement the recommended plan through the execution of a Project Partnership Agreement (PPA) between the Corps and the local sponsor
  - First quarter of 2009

Calcasieu River and Pass DMMP Project

Concluding Remarks

- Early and continual coordination with all interested parties facilitates the planning process
  - Island Creation Example
- Product Quality
  - Diverse Tiers of Collaborators
  - Value of early ITR involvement
- Managing for Success
  - Active engagement through out project with all Tiers
  - Manage a variety of expectations and needs